REMARKS

Claims 1, 2 and 4-13 were pending and considered. In an Office Action designated as Final, each of claims 1, 2 and 4-13 has been rejected. In response, Applicants respectfully request entry of this amendment in which each of independent claims 1, 8, 9 and 13 is amended. Entry of the amendment, reconsideration and allowance are respectfully requested.

In the Office Action, the Examiner has repeated the rejections made in the previous Office Action. In commenting on the Applicants' previous amendment and arguments, the Examiner states; "It is understood that pressure amplification means that the transformer changes the pressure between the input and output line. The transformer of Roche clearly does this, since 'the displacers driven as pumps can be used to increase pressure in the second pressure line ... with respect to the system pressure in the first pressure line' (e.g., column 7, lines 1-4)." Applicants respectfully submit that this understanding expressed by the Examiner is only partly correct.

The Examiner's comment quoted above is made in reference to the previous amendments to the claims. As then amended, the independent claims recited that the hydraulic transformer was such as to "provide controlled pressure amplification". Each of the independent claims has now been amended to more clearly recite the present invention, and the differences therein as compared with Roche. Thus, each of claims 1, 8, 9 and 13 now recites:

> **... a hydraulic transformer having an inlet and an outlet, said inlet coupled with said pressure source, said transformer being <u>adjustably variable within a range of pressure amplifications</u> to provide controlled pressure amplification of a fluid flowing therethrough; ...**

Claims 1-8 have been rejected under 35 U.S.C. § 013(a) as being unpatentable over Ogawa et al. in view of Roche. Claims 9-13 have been rejected under 35 U.S.C. § 103 as being unpatentable over Ogawa et al. in view of Maruta et al. and Roche. The Examiner has

acknowledged that Ogawa et al. does not teach an adjustable hydraulic transformer, and therefore relies on the teaching of Roche for this feature of the independent claims.

Roche teaches a fluid power regenerator (Fig. 5) having a fixed displacement pump 260 providing fluid at a fixed flow rate through primary pressure line 268, and secondary pressure lines 270 and 272 that branch from primary pressure line 268. A check valve 274 is provided in secondary pressure line 270 and connects directly to a system output line 276. Secondary pressure line 272 connects to respective input ports of a first gang of displacers 278 having output ports connected to tertiary pressure lines 280, 282 and 284. Tertiary output line 280 connects to input ports of a second gang of displacers 286. The first gang of displacers 278 includes three displacers "A", "B" and "C", and the second gang of displacers 286 includes four individual displacers "a", "b", "c" and "d" (column 13, line 54 through column 14, line 6). Displacers of the embodiment shown in Fig. 5 are similar to those shown in earlier described embodiments of Roche, which are described to be "fixed displacement gear drives (emphasis added) that can be used as either pumps or motors" (column 9, lines 7-8). Roche describes the purpose of the displacers, "instead of dumping a portion of the fluid flow directly to the reservoir ... in response to monitored pressures that exceed a predetermined system pressure, one or the other of the shut-off valves ... is allowed to open for routing the excess fluid through one of the displacers ... before emptying the fluid into the reservoir" (column 9, lines 28-35). The gangs of displacers are used to accommodate various fluid flow rates. The first gang of displacers 278 directs a predetermined portion of fluid flow from the fixed displacement pump 260 to the second gang of displacers 286. A remaining portion of the fluid flow through first gang of displacers 278 is divided between a system output line 276 and reservoir 264 (column 14, lines 49-60). The second gang of displacers 286 further divides a portion of the fluid flow in tertiary pressure line 280 into

finer increments. Flow therefrom can be provided in finer increments to system output line 276 or to reservoir 264 (column 16, lines 3-9). As noted above, in the response to Applicants previous amendment and arguments, the Examiner refers to column 7, lines 1-4 of Roche, which states "the displacers driven as pumps can be used to increase pressure in the second pressure line to the actuator with respect to system pressure in the first pressure line."

Nothing in the teaching of Roche suggests a controllably variable pressure transformer, that is a transformer that can be adjusted to control pressure within a range of pressures. It is respectfully submitted that the above amendments to independent claims 1, 8, 9 and 13 now clearly recite this feature, which is not taught in the prior art. There is no apparent teaching in Roche for anything other than fixed pressure amplification. The present invention allows the efficient operation of hydraulic motors within different operating ranges depending upon whether the pressure received at the motor inlet is a non-amplified pressure direct from an accumulator or a controllably variable amplified pressure from the hydraulic transformer. Accordingly, Applicants respectfully submit that each of independent claims 1, 8, 9 and 13 is now allowable, together with dependent claims 2, 4-7 and 10-12.

For the foregoing reasons, Applicants submit that no combination of the cited references teaches, discloses or suggests the subject matter of the amended claims. The pending claims are therefore in condition for allowance, and Applicants respectfully request entry of this amendment after Final Rejection, withdrawal of all rejections and allowance of the claims. Alternatively, Applicants respectfully request entry of this amendment for clarifying issues on appeal, for which a Notice of Appeal is being filed concurrently herewith.

In the event Applicants have overlooked the need for an extension of time, an additional extension of time, payment of fee, or additional payment of fee, Applicants hereby conditionally

petition therefor and authorize that any charges be made to Deposit Account No. 20-0095, TAYLOR & AUST, P.C.

Should any question concerning any of the foregoing arise, the Examiner is invited to telephone the undersigned at (260) 897-3400.

Respectfully submitted,

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CERTIFICATE OF MAILING

I hereby certify that this correspondence is being transmitted via facsimile to the U.S. Patent and Trademark Office, on: December 2, 2004.

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December 2, 2004
Date